Living Resources

Photo by DSWA

The Delaware Bay and Estuary Basin encompasses major habitats for diverse living resources within its vast expanse of coastal salt marsh and its upland forests. Many rare reptile, amphibian, birds, shellfish, and insect species reside within the basin. However, wildlife habitat is being reduced by ever-present human activity, and the fragility of aquatic and other species becomes more apparent every year.

Priority Communities

Wetlands serve a variety of vital ecological functions: they filter nutrients, sediments, and toxic chemicals from the water; minimize storm and tidal flooding; and slow erosion by providing a buffer against tides, waves and storm-event flow. They produce food through breakdown of biological material and provide important primary and seasonal habitat for animal and plant species dependent upon wetland environments.

Some of Delaware's most diverse freshwater, brackish and saltwater wetland communities constitute more than 27% of the basin. Moving upstream from estuarine marshes, travelers pass through brackish river wetlands dominated by forest or shrubby vegetation, through linear freshwater stream wetlands to headwater wetlands known as flats that vary from forested to shrubby to emergent vegetation. Depression wetlands, driven by ground water or precipitation, exist throughout the basin.

Most significantly, this basin contains wetlands with rare and unique ecological community types such as the Atlantic white cedar and bald cypress swamps, and Coastal Plain ponds, known also as Delmarva bays. These ponds are small but extremely significant isolated freshwater wetlands that are home to dozens of rare plant species, including five species considered globally rare.

Historically, this basin has lost substantial wetlands acreage to development and agricultural land conversion. An estimated 54% of Delaware wetlands have been lost since 1780, although the rate of loss has slowed recently. Of the nearly 2,000 acres of freshwater and saltwater wetlands lost in Delaware between 1982 and 1992, about 740 were in this basin. Today, much of the saltwater marshes and coastal lands are owned and/or controlled by state or federal government, reflecting the success of the Coastal Zone Act.

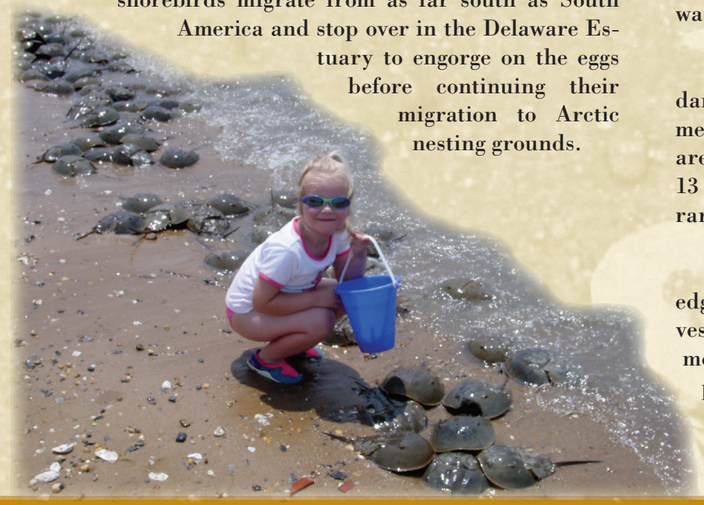
Mature forests provide diverse habitat for many species of native mammals, invertebrates, amphibians, reptiles, and birds, including migratory songbirds. Of the 58,014 remaining forested acres, most tracts in the basin are less than 150 acres. Clearing for agriculture and development continues to fragment existing forests, and very little regulatory protection exists for upland forests.

Pea Patch Island, off the coast of Delaware City, is home to the largest colony of nesting herons on the east coast north of Florida. The population has declined from more than 12,000 nesting pairs in the late 1980s to about 3,000 pairs today. In 1998, the Delaware Coastal Management Program developed a Special Area Management Plan which outlines strategies to protect the heronry.

Priority Species

The Delaware Bay basin and its wetlands provide important migratory staging grounds and wintering habitat for many waterfowl species of the Atlantic Flyway. Losing half of the wetlands in the Atlantic Flyway over the last 200 years led to wetlands management and restoration efforts to create staging, brood rearing and wintering areas, and creation of the North American Waterfowl Management Plan and other focused efforts.

The Delaware Bay coastline is integral to the survival of migratory shorebirds that depend on horseshoe crab eggs for food. More than a million shorebirds migrate from as far south as South America and stop over in the Delaware Estuary to engorge on the eggs before continuing their migration to Arctic nesting grounds.



Oysters being harvested from the Delaware Bay

Oyster beds in the Delaware Bay extend roughly from Woodland Beach to Big Stone Beach across to Cape May, N. J., in addition to scattered riverbeds. Delaware sustained a commercial harvest through 1985 followed by 2-week harvests in June from 1991-95. On Nov. 1, 2001, the state opened its first "direct harvest" season in which oysters go directly from public beds to shippers to consumers. Traditionally, oysters were taken from public beds and transferred to lease beds further down the bay, which resulted in 50% oyster mortality.

The Delmarva fox squirrel is found in mature hardwood and loblolly pine forests along streams and the bay. Population declines from loss of habitat put this squirrel on the Federal Endangered Species list in 1967. It was reintroduced in Delaware, but their numbers remain low.

Freshwater mussels – our country's most endangered family of animals – live in bottom sediments of freshwater streams, rivers, and ponds and are important indicators of water quality. Of the 13 species in Delaware, 11 are rare or extremely rare.

The Atlantic blue crab is near the northern edge of its eastern range in the Delaware Bay. Harvesting pressure keeps the population moderate at most due in part to harvest declines in the Chesapeake Bay.